COMPETITIVE ENERGY MARKETS – REALITY OR PIPEDREAM
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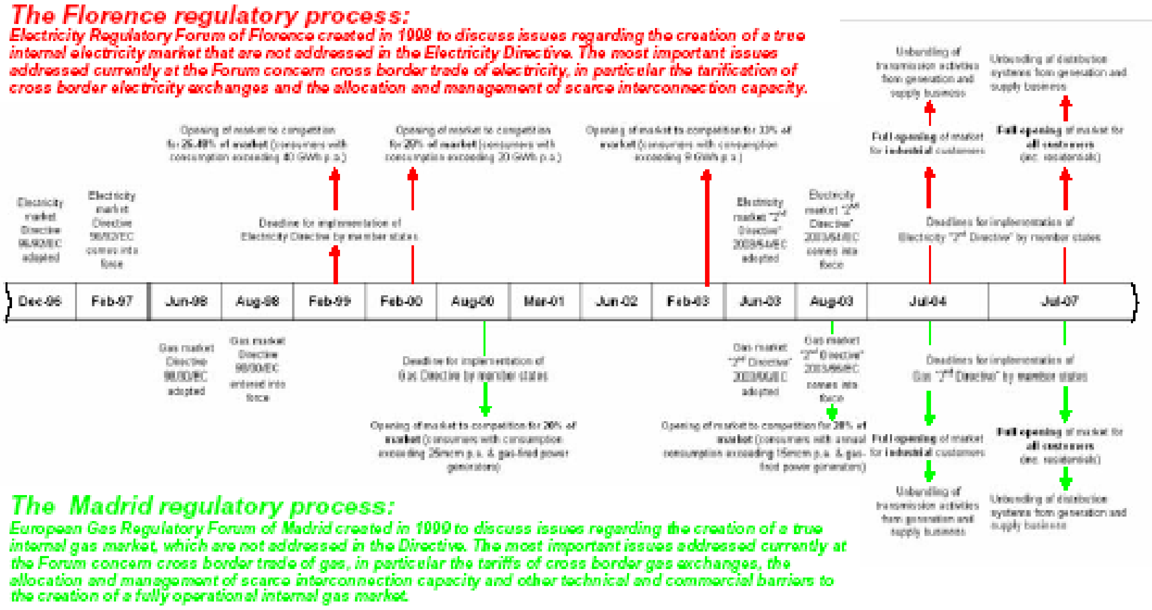
Liberalisation of the European energy markets was originally driven by the 1996 EU Electricity Market Directive and 1998 Gas Market Directive. The EU envisages the phased opening of energy markets to competition such that all consumers will benefit from a choice of suppliers by 2007 in both electricity and gas. The directives refer to the creation of *"an internal market comprising an area without internal frontiers in which free movement of goods, persons, services and capital is ensured".* Thus the vision referred to a single market where gas and electricity could move freely between individual countries specifically encouraged interconnection and interoperability of systems.



Theoretically markets for electricity and gas are already substantially open with just a few exceptions in gas:

Declared market opening (%)

	2000		2001		2002		2003	
	Electricity	Gas	Electricity	Gas	Electricity	Gas	Electricity	Gas
Austria	32%	49%	100%	49%	100%	100%	100%	100%
Belgium	35%	59%	35%	59%	52%	59%	80%	83%
Denmark	90%	30%	90%	30%	100%	35%	100%	100%
Finland	100%	90%	100%	-	100%	-	100%	-
France	30%	20%	30%	20%	34%	20%	37%	37%
Germany	100%	100%	100%	100%	100%	100%	100%	100%
Greece	30%	-	30%	-	34%	-	34%	-
Ireland	30%	75%	30%	75%	56%	82%	56%	85%
Italy	35%	96%	45%	65%	70%	100%	66%	100%
Luxembourg	-	51%	-	51%	-	72%	57%	72%
Netherlands	33%	45%	33%	45%	63%	60%	63%	60%
Portugal	30%	-	30%	-	45%	-	45%	-
Spain	54%	72%	45%	72%	100%	100%	100%	100%
Sweden	100%	47%	100%	47%	100%	47%	100%	51%
UK	100%	100%	100%	100%	100%	100%	100%	100%
	Source: COM(2001) 125 final - 13/03/01		Source: SEC(2001) 1957 03/12/01		Source: SEC(2003) 448 07/04/03		Source: 3rd benchmarking report 1 March 2004	

The reality however is perhaps somewhat different. Attend any major conference and anecdotes about problems in major gas and electricity markets abound. The key is whether there is actually customer choice and this is perhaps reflected in the most recent customer switching analysis:

Switching estimates for calendar year 2002

	Electricity		Gas	
	Large eligible industrial users [1]	Small commercial / domestic	Large eligible industrial users [2]	Small commercial / domestic
Austria	15%	5%	6%	0%
Belgium	5% [3]	-	unknown	-
Denmark	45%	-	17%	-
Finland	[4]	10%	-	-
France	15%	-	20%	-
Germany	20%	5%	5%	<2%
Greece	0%	-	-	-
Ireland	20%	2%	100% [5]	-
Italy	15%	-	10%	0%
Luxembourg	10% [6]	-	0%	-
Netherlands	20%	-	15%	-
Portugal	10%	-	-	-
Spain	20%	-	38%	1%
Sweden	[4]	10% [7]	0%	-
UK	15%	12%	16%	19%

1. In general this refers to clients consuming more than 1GWh/year
2. In general this refers to clients consuming more than 0.1million m^3/year
3. 40% have renegotiated their contract
4. Most large users in Finland and Sweden tender every year for new supplier
5. All large users (mostly power stations) self ship
6. 15% have renegotiated their contract
7. Cumulative 40% since 1998

Source: 3rd Benchmarking report, 1 March 2004

Based on experience in those countries which have already had a competitive market for some time, a well functioning market might be expected to have around 15-20% of businesses changing suppliers every year with most, if not all, seeking to renegotiate tariffs with their current supplier every year. For households, an annual level of switching of 10-15% would seem a reasonable benchmark. It appears that this degree of switching is prevalent for the larger customers in the electricity sector but this data must be interpreted with care as it only refers to the eligible customers and does not present the level of tariff renegotiation with existing suppliers. At the same time, the degree of switching is significantly lower in the gas markets and at the domestic level only the UK and Scandinavia is customer choice a reality.

So, it appears that Europe is still some distance away from achieving the goal of genuinely competitive markets choice for all customers in individual countries let alone an integrated market across Europe. We must consider the key steps that are required to create the markets that will deliver this vision:

Key steps in creating liberalised markets

Network access	Ability for market participants to obtain network capacity on a non-discriminatory basis; clear and unambiguous rules for congestion management
Access to flexibility services	Access to storage and other balancing services on a non-discriminatory basis at a reasonable price
Reduced barriers to entry	Ability for new participants to enter new markets without significant barriers in terms of scale, cost or legal and financial burden.
Market liquidity	Markets that have sufficient liquidity such that non-integrated participants can source/sell their requirements/production; markets that are transparent and give clear signals on need for future investment
Consistent regulatory landscape	Clear regulatory rules and market oversight that provide certainty for participants to make longer term business decisions
Clear position on security of supply	Clear indications on reserve margins, fuel mix etc. allowing the market to respond appropriately

A number of issues arise in each of these steps which we consider in further detail below.

Networks and flexibility services: still some way to go

Given the physical nature of the energy markets, access to the underlying transportation and transmission and associated flexibility services is fundamental in creating a liberalised market. Without a level playing field for access to the networks, the market cannot really exist. At the same time without appropriate flexibility mechanisms, whether they relate to storage or balancing mechanisms, it is difficult, if not impossible, for new entrants to enter what is essentially a physically delivered market. Organisations such as EASEE-Gas, Eurelectric, UCTE, GTE, EFET as well as the Council of European Energy Regulators (CEER) are working to create a degree of consistency.

Selected metrics for network access

	Electricity					Gas				
	Unbundling transmission system owner	VI ownership	Balancing conditions favourable	Biggest 3 generators share of capacity	Network access	Unbundling transmission system owner	VI ownership	Balancing conditions favourable	Concentration in wholesale market	Network access
Austria	Legal	Most DSOs	Favourable	33%	Regulated	Legal	DSOs	Favourable	Yes	Regulated
Belgium	Legal	64% VI	Unfavourable	66%	Regulated	Legal		Moderate	Yes	Regulated
Denmark	Legal	Some DSOs	Favourable	25%	Regulated	Ownership	100%	Favourable	Yes	Regulated
Finland	Ownership	Around 50%	Favourable	29%	Regulated	na	na	na	na	na
France	Management	100%	Moderate	86%	Regulated	Accounts	100% VI	Moderate	Moderate	Regulated
Germany	Legal	100%	Unfavourable	61%	Negotiated	Management		Unfavourable	Moderate	Negotiated
Greece	Legal/Mgmt	49% VI	Unfavourable	87%	Regulated	na	na	na	na	na
Ireland	Legal/Mgmt	100% VI	Moderate	90%	Regulated	Management	100% VI	Favourable	No	Regulated
Italy	Own/Legal	State owned	Moderate	72%	Regulated	Legal	60% VI	Favourable	Yes	Regulated
Luxembourg	Accounts	na	Unfavourable	0%	Regulated	Management	na	Moderate	Yes	Regulated
Netherlands	Ownership	State owned	Favourable	33%	Regulated	Management	DSOs govt	Moderate	Moderate	Hybrid
Portugal	Ownership	30% VI	Moderate	74%	Regulated	na	na	na	na	na
Spain	Ownership	Minimal	Favourable	79%	Regulated	Legal	40% VI	Favourable	Yes	Regulated
Sweden	Ownership	Most DSOs	Favourable	50%	Regulated	Accounts	often VI	Moderate	Yes	Regulated
UK	Ownership	Scottish plus some DSOs	Favourable	37%	Regulated	Ownership	No	Favourable	No	Regulated

Source: 3rd Benchmarking report, 1 March 2004

While conditions for network access have improved in recent years, there are few countries where network and flexibility conditions are considered favourable to new entrants. At the same time there is considerable market concentration in certain key countries in both electricity and gas. Without speeding up the current efforts, particularly in gas, it seems unlikely that a fully liberalised market can be created within the timeframe envisaged by the

Directives. Furthermore, specific focus will be needed on the 10 accession countries to ensure that implementation of the Directive, which under the current approach is likely to lead to, at best, a series of individual, albeit liberalised, country markets results in a single European market.

Additionally ownership of the networks remains largely in the hands of vertically integrated incumbents. While the rules under the 2nd Directives for Electricity and Gas markets force separation of the networks on a legal and accounting basis, such ownership can remain with companies active in other parts of the value chain. Specifically the Directive states that parent companies can continue to look at return on assets etc. on a group basis. Potential new entrants will be concerned that this leaves open the possibility that parent companies take decisions which are not conducive to the liberalisation of the market (or maximisation of value of the network) but still give the parent company a higher overall return. We believe in the longer term regulators will force the separation of network ownership from other parts of the energy value chain.

Market model creates barriers to entry

The EC Directives set out the broad framework for liberalisation of the European energy markets. However application of this framework has necessarily meant interpretation on a country by country basis. Many companies have tried to increase their geographical footprint by acquiring interests in incumbent energy utilities in multiple countries on the basis that this is a more profitable strategy than building a business from scratch. This has fitted in quite well with the "national champion" agendas while resulting in the emergence of the super-majors amongst European energy utilities. These companies hold numerous interests in individual countries which viewed on country only basis may not appear significant.

Company shareholdings and interests by country

Country	RWE	EON	EdF
Austria	✓		✓
Finland		✓	
France			✓
Germany	✓	✓	✓
Italy		✓	✓
Netherlands	✓	✓	✓
Portugal	✓		
Spain		✓	✓
Sweden		✓	✓
UK	✓	✓	✓
Czech Republic	✓	✓	
Hungary	✓	✓	
Poland	✓		
Slovak Republic	✓	✓	
Switzerland		✓	

Source: Company annual reports and Deloitte analysis

However in the context of an integrated European market, where electricity and gas flow freely across borders, these individual holdings provide the companies a strong influence on the shape and dynamics of the market by the formation of a club mentality amongst incumbents across a wide range of markets. Additionally, this strategy results in the reduction of competition to existing incumbents as the number of potential players is reduced. These issues present a significant barrier to the entry for new participants by increasing the risk and cost associated with a greenfield approach. The question that regulators must answer is whether a) is such the significant presence across Europe of certain companies is in the best interests of liberalisation? b) should the country by country approach to regulation be changed to consider the impact on a wider European scale.

Vertical integration reduces market liquidity

The liberalisation of the European energy markets originally envisioned many producers and suppliers of gas and electricity. This was also reflected in the way the UK markets, pre-EU directives, were liberalised. In electricity, the incumbent CEGB was divided into four companies, new generation projects were encouraged and divestiture of existing generation capacity was forced. On the supply side 14 RECs were created with numerous new entrants. In gas, a number of upstream players with excess UK continental shelf gas moved downstream to sell to industrial and commercial customers. At the same time the gas regulator, OFGAS, forced the former monopoly, British Gas, to sell part of its portfolio as "release gas". In many other European markets there were already a number of players in both the generation and supply and these were encouraged to move outside their existing regional focus. However for a number of other countries, former monopolies continue to maintain their vertically integrated positions.

In the last three to four years the market has consolidated and reduced the number of participants, particularly in the UK, Germany and the Netherlands. This has taken the form of both horizontal integration to achieve scale effects as well as vertical integration to provide a hedge against shifting dynamics of the value chain. The net impact of this is to change the structure of the markets such that the interfaces between multiple buyers and sellers of commodity, representing the wholesale market, are substantially reduced. The need to enter into such wholesale market transactions is limited to relatively short-term optimisation and balancing activities at the margin. At the same time three major players, EdF, RWE and EON have developed a pre-eminent position in the European energy landscape, particularly in the biggest economies of Europe. This model thus begins to resemble the model of the oil industry where the super-majors dominate the upstream, refining and downstream portions and has a major impact on the development of the market:

- Liquidity of markets is reduced as vertically integrated players trade at the margin only, particularly since electricity and gas markets are largely regional;
- New entrants find it increasingly difficult to enter the market due to scale effects, particularly in supply to customers;
- Existing unintegrated participants are disadvantaged as they are forced to sell to, or buy from, vertically integrated players or face an illiquid market.

Certainly some of these issues were reflected in the delegate survey at Flame 2004, a major European gas conference:

Selected market participant survey results

How would you characterise Europe's gas market in 10 years time?		
Dominated by a few fully integrated energy companies		64%
Dominated by two sets of very large companies, one upstream, one downstream		3%
Dominated by gas sellers		11%
Dominated by a few large international gas buyers		15%
Dominated by national champion gas buyers		7%
Do you expected the existing dominant companies in the following gas markets to lose at least 30% of their market share to new entrants before 2008?		
	Yes	No
Germany	19%	81%
France	24%	76%
Italy	56%	44%
Spain	72%	28%
Belgium	58%	42%
Why do you think that traded market across Europe lack liquidity?		
Access to pipeline capacity		41%
Refusal of major companies to participate significantly		30%
Lack of trading counterparties		16%
Regulatory risk		8%
Limited understanding of trading		5%

Source: 2004 Deloitte Flame Conference survey

Regulators will need to consider what steps need to taken to be taken to encourage liquidity in the market and whether structural solutions may be required.

A consistent regulatory landscape is needed

One of the issues that European liberalisation has faced is the constant change faced by industry participants. Whether this relates to the design of the market, or to interpretations of acceptable long-term contracts, each market participant must assess the level of the regulatory risk it faces in each area of it business. This risk is particularly important when a company is making investment-divestment decisions. Increased regulatory risk has two impacts. Firstly companies will look for higher returns on investments. Secondly companies will look for shorter payback periods. Both factors are currently discouraging investors and lenders from backing large long-term projects. This is obvious in the UK generation sector where many generation projects have got the relevant consents but few are likely to proceed much further at this stage. And this is at a time when the UK could face a shortage of generation capacity as early as 4 to 5 years from now.

We believe that European regulators need to set out a clear long term vision of how the market is likely to develop to avoid repeating some of the dramatic swings in supply/demand balance and related impact on price that the UK has seen.

Cost of carbon

The EU emissions trading scheme (ETS) has been getting considerable attention recently, particularly with the recent deadlines for submission of draft nation allocation plans. This is an important element of regulatory risk and also the economics of existing and new investment. ETS is based on country by country allocation of credits and it appears that certain countries are likely to set tougher targets for emissions reductions than others. Secondly the precise impact of the allocations will be different between different industries. Additionally 10 countries have yet to publish their National Allocation Plans (NAPs) and many who have published them do not make clear the rules for the second phase of the

ETS. Thus a company seeking to even consider a 5 year investment plan would have to make considerable assumptions in this important area.

It is important that regulators take into account the principles of consistency of regulation in the matter of NAPs as well. To avoid distortions across countries, we believe that NAPs should have a greater degree of consistency across countries with respect to both level of emission reductions as well as the target industries. At the same time investors need greater certainty over the impact of ETS in the future and we believe that the rules governing the second phase need to be more clearly defined.

Security of supply

Security of supply has clearly been an important area of recent debate, particularly in the UK gas market. Consistency of regulation and appropriate monitoring against abuse of dominant positions are both important elements in giving investors greater certainty over returns. This needs to be reinforced with clearer positions on macro indicators of security of supply e.g. reserve margins, fuel mix, etc. This should allow the market to respond more effectively to the needs of the market. We recognise that recent exemptions from regulation are important in ensuring continuing security of supply as Europe must compete with other parts of the world for investment funds. However it should be recognised that derogation's for extended periods (and consequent reduced access to other market participants) are likely to slow down the creation of the integrated European market.

Conclusions

European energy markets have changed beyond recognition since the mid-1990s. Many companies entered the market and many exited unable to realise the opportunities as this new market developed more slowly than they had originally hoped. Nevertheless, the market has improved in terms of a level playing field for all and this is feeding through in benefits to customers. The impact of 10 EC Accession countries is likely to slow the overall liberalisation process. As a consequence we believe that under the current liberalisation approach and at the current pace of change it is unlikely that the EU vision of a competitive single European market for all customers will be a reality by 2007 and for the gas market, it is no more than a pipedream.

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